

The Thrill of Victory, the Complexity of Defeat: Self-Esteem and People's Emotional Reactions to Success and Failure

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Low self-esteem people are assumed to have more severe emotional reactions to failure than are high self-esteem people, but this assumption has not received consistent empirical support. In this article the authors report 2 investigations that found that self-esteem differences of this sort emerge for emotions that directly implicate the self (e.g., pride, humiliation) but not for emotions that do not directly implicate the self (e.g., happiness, unhappiness). Additional evidence suggested that this occurs, in part, because low self-esteem people overgeneralize the negative implications of failure. The relevance of these findings for understanding the nature and functions of self-esteem is considered.

Self-esteem has become the panacea of modern life. It has been touted as the antidote to poverty, drug use, and underachievement and lauded as the royal road to financial success, health, and personal fulfillment. Task forces in several states have been created to instill self-esteem in school-age children. And a multitude of books and magazine articles have appeared in recent years that promise to help people build and maintain self-esteem. In short, no matter what ails you today, self-esteem is the cure.

Considering the extravagant claims made in its name, one might assume that self-esteem is well understood. This is not so. Although there is some agreement about self-esteem's essential attributes (Baumeister, 1993), there is less agreement about the functions it serves and when it is important. In this article we address these issues. The research we report derives from an affect regulation model of self-esteem functioning (Brown & Dutton, 1994a, 1994b). The model assumes that self-esteem aids in the regulation of self-relevant emotional states. We begin with a general discussion of the model before turning to the more specific issues we examined in our research.

Nature of Self-Esteem

Numerous theorists have attempted to define self-esteem. These attempts have ranged from an emphasis on primitive libidinal impulses (Kernberg, 1975) to feelings of existential security in a meaningful universe (Solomon, Greenberg, & Pyszczynski, 1991). We take a less exotic approach and define self-

esteem in terms of feelings of affection for oneself, no different, in kind, than the feelings of affection one has for others. Within normal populations, high self-esteem (HSE) is characterized by a general fondness for oneself; low self-esteem (LSE) is characterized by mildly positive or ambivalent feelings toward oneself (rather than excessively negative feelings toward oneself; Baumeister, Tice, & Hutton, 1989).

In sympathy with other theorists (e.g., Bowlby, 1969; Sullivan, 1953), we assume that these global feelings of affection toward oneself normally develop early in life, largely, though not wholly, in response to the kinds of relationships one forms with one's primary caregivers. This assumption distinguishes our approach from more cognitively oriented models. Other theorists assume that self-esteem develops from a judgmental process in which people survey their various constituent qualities, weight these assessments by their importance, and somehow combine these weighted products to form an overall judgment of self-regard (e.g., Coopersmith, 1967; Harter, 1990; Rosenberg, 1979). As detailed elsewhere (Brown, 1993; Brown & Dutton, 1994a, 1994b), we do not believe self-esteem forms in this way. In our view, the feelings of affection that characterize HSE are explicitly *not* based on an assessment of one's more molecular qualities.

With respect to function, we believe self-esteem is most importantly related to the regulation of a class of emotional states we call *feelings of self-worth* (FOSW). Feeling proud and pleased with myself (on the positive side) versus feeling humiliated and ashamed of myself (on the negative side) are examples of what we mean by FOSW. Many theorists have spoken of a *self-enhancement motive*, often using the term to refer to a need to *think well* of oneself (e.g., Shrauger, 1975). We use the term a bit differently. To us, self-enhancement refers to a desire to maximize *feelings* of self-worth.

High self-esteem people are especially adept at satisfying this need (Brown, 1991, 1993; Taylor & Brown, 1988). They consistently respond to events in ways that maintain or restore FOSW. Their ability to do so is particularly apparent when they confront negative outcomes, such as failure in the achievement

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This research was supported by a Presidential Young Investigator Award from the National Science Foundation (SBR-8958211) and by a grant from the Horizons Foundation of Seattle.

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domain or interpersonal rejection. This is the value of having HSE; it serves to regulate one's affective life in ways that protect or restore FOSW.

This is not to say that self-esteem is synonymous with FOSW. We conceive of self-esteem in dispositional terms, as a stable aspect of personality. In contrast, FOSW rise and fall in response to internal and environmental events. One might argue that this is simply the difference between different forms of self-esteem, and indeed, some researchers have used the term *state self-esteem* to refer to the emotional states we call FOSW (see, for example, Butler, Hokanson, & Flynn, 1994). We believe the term *state self-esteem* is a misnomer. As we see it, self-esteem is a capacity—the capacity to respond to events in ways that protect or restore FOSW. Just as one doesn't confuse knowledge with intelligence, so too do we think it is misleading to regard FOSW as a form of self-esteem.

This assumption has an important implication for attempts to experimentally induce or alter self-esteem in the laboratory. Many investigators have claimed to create an experimental analogue of HSE or LSE by providing research participants with false personality feedback or exposing them to a success or failure experience (e.g., Heatherton & Polivy, 1991). These procedures manipulate FOSW, not HSE or LSE. When experimenters give HSE people negative feedback, they are not inducing LSE; they are observing how HSE people respond to temporary reductions in FOSW. Only manipulations that alter the general way people feel about themselves (and the characteristic way they respond to valenced events) can be regarded as creating anything even approaching HSE or LSE.¹

Self-Esteem and Emotional Responses to Success and Failure

In this article we examine some implications of our model of self-esteem functioning. Our most basic assumption is that self-esteem is an important determinant of the way people respond to positive and negative events. This is particularly true with respect to the regulation of FOSW following failure.

Currently, there is only limited support for this claim. Although some investigations have found that LSE people suffer more emotional distress following failure than do HSE people (e.g., Baumeister & Tice, 1985; Kernis, Brockner, & Frankel, 1989; Moreland & Sweeney, 1984), others have not (e.g., Swann, Griffin, Predmore, & Gaines, 1987; Swann, Wenzlaff, Krull, & Pelham, 1992). Hence, greater emotional reactivity on the part of LSE people to failure, though often assumed, is not a clearly established empirical fact.

Some of the inconsistency in prior research might be due to the kinds of emotions investigators have examined. At least two kinds of emotional reactions to valenced events can be distinguished (Weiner, Russell, & Lerman, 1978). The first involves general, undifferentiated reactions of pleasantness or unpleasantness. The emotional labels *happy* versus *unhappy* and *sad* versus *glad* capture these outcome-dependent reactions (Weiner et al., 1978). A second type of emotion involves a more sophisticated and differentiated response to the self-relevant implications of a valenced event. Here one is not simply respond-

ing to the positive or negative nature of the event itself but to what the event is thought to imply about oneself. These self-relevant emotions, which we refer to as FOSW, include terms such as *proud* versus *humiliated* and *pleased with myself* versus *ashamed of myself*.

Our research was guided by the hypothesis that self-esteem differences in emotional reactions to valenced outcomes should be most apparent for the class of emotions we are calling FOSW. Outcome-dependent emotions do not directly implicate the self. Consequently, they should be only minimally affected, if affected at all, by people's level of self-esteem. In contrast, FOSW are intimately related to people's understanding of themselves. For this reason, they should be heavily influenced by self-esteem.

This influence should be especially evident following failure. Prior research has shown that the two self-esteem groups generally show comparable reactions to positive outcomes but divergent reactions to negative outcomes (for reviews, see Brown, 1991, 1993; Campbell, 1990). This occurs because both self-esteem groups tend to accept and embrace success, but HSE people are more apt to reject or otherwise dismiss the negative implications of failure.

An investigation by Shrauger and Lund (1975) illustrated these tendencies. In this study, HSE participants and LSE participants were first interviewed by a graduate student in clinical psychology. They were then led to believe that the interviewer had evaluated them positively or negatively; a no-feedback control condition also was included. The two self-esteem groups did not differ in their assessments of the interviewer's competence in the positive feedback or control conditions, but HSE participants judged the interviewer as less competent than did LSE participants in the negative-feedback condition. Conceptually similar findings have been reported elsewhere (Brown & Gallagher, 1992; Brown & Mankowski, 1993; Brown & Smart, 1991; Campbell & Fairey, 1985). Because emotional reactions to events follow cognitive appraisals (Frijda, 1988; Ortony, Clore, & Collins, 1988; Smith & Lazarus, 1990; Weiner, 1986), these differences led us to predict that self-esteem differences in emotional responses to performance outcomes will be stronger after failure than after success.

Study 1

In an initial test of these ideas, we led HSE participants and LSE participants to succeed or fail at an achievement-related task. We then measured their self-reported emotional reactions to these performance outcomes. Emotional responses were of two types: outcome-dependent emotions and FOSW. On the basis of the arguments just presented, we predicted that self-esteem differences would be most pronounced for FOSW following failure.

¹ The same is true for manipulations that allegedly threaten or bolster self-esteem. These manipulations raise or lower FOSW, but unless they alter the way people generally feel about themselves, they do not affect self-esteem.

Method

Participants

The participants were 39 male and 133 female University of Washington undergraduates who participated in exchange for extra course credit. They were drawn from the top or bottom thirds of the Rosenberg (1965) self-esteem scale. This scale is a widely used measure of self-esteem (Baumeister et al., 1989; Rosenberg, 1979). It focuses on general feelings toward the self without reference to any specific quality or attribute. Respondents complete the scale by indicating their agreement with each of 10 items (e.g., "I take a positive view of myself," "All in all, I am inclined to feel that I am a failure.") on 4-point scales (0 = *strongly disagree*, 3 = *strongly agree*). After reversing the scoring for 5 negatively worded items, a total self-esteem score is obtained by summing the 10 responses. The theoretical range of scores with this procedure is 0–30. The present sample was made up of 91 LSE participants ($M = 15.74$) and 81 HSE participants ($M = 27.04$). The experimenters were unaware of participants' self-esteem levels throughout the experimental procedure. Three additional participants failed to follow directions, and their data were discarded.

Design, Materials, and Procedure

The experiment used a 2 (self-esteem) \times 2 (task difficulty) experimental design. Participants were tested in groups of 2–4, with each participant seated at a separate computer. (Participants were seated in such a way that they could not see each other's computer screen.) All instructions and experimental measures were presented on the computer.

At the start of the experimental sessions, the participants learned that the experiment involved a problem-solving ability called *integrative orientation*. Integrative orientation was described as an aspect of creativity; an ability to find creative and unusual solutions to problems.

The experimental task was then introduced. This task was the Remote Associates Test (RAT; Mednick, 1962). In this task, participants are shown three words (e.g., car—swimming—cue) and asked to find a fourth word that relates to the other three (pool). Working interactively with the computer, participants completed three sample problems to ensure that they understood how the problems were solved.

Participants were then informed that the test consisted of 10 problems and that they would have 5 min to solve these problems. Success and failure were experimentally manipulated by varying the difficulty of the problems participants received. We randomly assigned participants to conditions: Half of them received a set of easy problems (hereafter referred to as the success condition), and half received a set of difficult problems (hereafter referred to as the failure condition). Difficulty level was determined on the basis of prior testing with an independent sample and on published norms (McFarlin & Blascovich, 1984). McFarlin and Blascovich provided substantial evidence that these procedures effectively manipulate success and failure while minimizing suspicion. For this reason, we did not give participants false feedback regarding their task performance.

When the allotted time for working on the test had expired, the computer paused for a moment and informed participants how many problems they had correctly solved. After receiving this information, participants evaluated their performance (1 = *very poor*, 9 = *very good*) and completed an 8-item emotion scale. The scale consisted of four outcome-dependent emotions (*glad*, *happy*, *sad*, *unhappy*) and four self-relevant emotions or FOSW (*proud*, *pleased with myself*, *ashamed*, *humiliated*). The items were presented in a single random order (with the outcome-dependent emotions and FOSW interspersed). Participants indicated the extent to which they were at present feeling each emotion on 7-point scales (1 = *not at all*, 7 = *very much*).

When they had finished completing these items, participants in-

formed the experimenter that they were through. They were then debriefed, thanked, and excused.

Results and Discussion

Preliminary Analyses

We performed a 2 (self-esteem) \times 2 (outcome) analysis of variance (ANOVA) on the number of RAT problems participants solved.² The only significant effect was the main effect of outcome. As expected, participants in the success condition solved more problems ($M = 7.08$) than did participants in the failure condition ($M = 2.76$), $F(1, 168) = 175.65$, $p < .001$. Similar analyses of participants' perceived performance ratings also revealed a main effect of outcome, $F(1, 168) = 126.16$, $p < .001$. Participants in the success condition evaluated their performance more favorably ($M = 6.18$) than did those in the failure condition ($M = 2.80$). These analyses also revealed a main effect of self-esteem, $F(1, 168) = 9.23$, $p < .01$. Across experimental conditions, HSE participants evaluated their performance more favorably ($M = 4.94$) than did LSE participants ($M = 4.04$). The interaction was not significant ($F < 1$). (After presenting our main results, we discuss the implications of these findings.)

Main Analyses

Our primary hypothesis was that LSE participants would experience greater emotional distress following failure than would HSE participants, particularly for the class of emotions we have called FOSW. After determining that emotion valence (positive vs. negative) did not modify any of our main findings, we reversed the scoring for the negative emotion items (*sad*, *unhappy*, *humiliated*, and *ashamed*) and averaged the four indicators of each type of emotion to form two scales ($\alpha s = .79$ and $.80$ for the outcome-dependent and FOSW scales, respectively). We then performed a 2 (self-esteem) \times 2 (outcome) \times 2 (emotion type) ANOVA on these emotion scales, treating the last variable as a within-subjects one.

The ANOVA revealed main effects of self-esteem, $F(1, 168) = 47.06$, $p < .001$; and outcome, $F(1, 168) = 57.50$, $p < .001$; a marginal Self-Esteem \times Outcome interaction, $F(1, 168) = 3.57$, $p = .06$; and the predicted Self-Esteem \times Outcome \times Emotion Type interaction, $F(1, 168) = 4.71$, $p < .05$. Table 1 presents the means relevant to interpreting the three-way interaction. The left side of the table displays the results for the outcome-dependent emotions. Simple effects tests of these data revealed simple main effects of self-esteem, $F(1, 168) = 42.00$, $p < .001$, and outcome, $F(1, 168) = 49.86$, $p < .001$, but no two-way interaction ($F < 1$). The lack of an interaction means that the outcome manipulation had a comparable effect on the emotional responses of HSE participants and LSE participants.

A different pattern emerged in the analysis of FOSW (see the right side of Table 1). Here, simple main effects of self-esteem, $F(1, 168) = 45.20$, $p < .001$, and outcome, $F(1, 168) = 57.05$,

² Sex of participant did not modify any of the findings reported in this article, so this variable will not be discussed further.

Table 1
Mean Ratings of Outcome-Dependent Emotions and FOSW as a Function of Prior Outcome and Self-Esteem: Study 1

Outcome	Emotion type							
	Outcome dependent				FOSW			
	LSE		HSE		LSE		HSE	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Success	5.10	1.13	5.94	0.74	5.24	1.09	5.88	0.90
Failure	3.88	1.05	5.02	1.16	3.64	1.06	5.11	1.10
Difference	1.22		0.92		1.60		0.77	

Note. Values could range from 1 to 7; higher scores indicate more positive emotion. FOSW = feelings of self-worth; LSE = low self-esteem; HSE = high self-esteem.

$p < .001$; were qualified by a simple Self-Esteem \times Outcome interaction, $F(1, 168) = 6.59, p = .01$. One way to interpret the interaction is in terms of the effects of the outcome manipulation at each level of self-esteem. In comparison to success, failure engendered lower FOSW among LSE participants, $F(1, 168) = 49.41, p < .001$, than among HSE participants, $F(1, 168) = 11.54, p < .001$. Another way to interpret the interaction is to note that self-esteem differences were more pronounced following failure, $F(1, 168) = 41.80, p < .001$, than following success, $F(1, 168) = 8.03, p < .01$.³

Supplemental Analyses

Earlier we noted that, across experimental conditions, HSE participants evaluated their performance more favorably than did LSE participants. This finding indicates that the two self-esteem groups differ in how they construe performance outcomes. HSE people are generally more generous in their performance appraisals than are LSE people.

These differences in how performances are evaluated could conceivably explain why LSE people experience lower FOSW following a poor performance than do HSE people. One way to address this issue is to determine the extent to which the effects we observed earlier are eliminated once these perceptions are controlled. The logic behind this approach is as follows: If the emotion effects reflect differences in the way the two self-esteem groups appraise their performances, these effects should be greatly diminished when we remove the variance due to these perceptions.

To examine this possibility, we performed a 2 (self-esteem) \times 2 (outcome) analysis of covariance (ANCOVA) on FOSW scores, using participants' evaluations of their performance as a covariate. The covariate was highly related to emotion scores ($\beta = .57, p < .001$), and controlling for these perceptions did eliminate the main effect of outcome ($F < 1$). However, the self-esteem main effect and the critical Self-Esteem \times Outcome interaction remained significant, $F(1, 167) = 33.05, p < .001$, and $F(1, 167) = 6.96, p < .01$, respectively. Substantively, these findings indicate that differential perceptions of performance

do not entirely explain why LSE participants responded to a negative outcome with lower FOSW than did HSE participants.

Another possibility occurred to us during the course of conducting these analyses. We call this explanation the *differential sensitivity hypothesis*. According to this hypothesis, the self-esteem groups are distinguished not so much by how they perceive performance outcomes but by how reactive or sensitive they are to these perceptions.

This hypothesis can be tested by determining whether self-esteem interacts with perceived performances to predict FOSW. To do this, we conducted a hierarchical multiple regression analysis. The predictor variables were self-esteem, perceived performance, and an interaction term found by calculating the cross-product of these variables (see Cohen & Cohen, 1983). All sources of variance, including the interaction term, made significant contributions to the prediction of FOSW (all $ps < .005$).

Figure 1 offers an intuitive grasp of these effects. The data were derived by first dividing the sample into three groups on the basis of participants' perceived performance scores: Those who perceived their performance as quite poor ($M = 1.88$), those who perceived their performance as quite good ($M = 7.44$), and those whose perceptions of their task performance were more intermediate ($M = 4.55$). In accordance with the differential sensitivity hypothesis, the figure discloses that differences in FOSW as a function of self-esteem widen as performances are perceived to be more and more negative. Self-esteem differences in emotion are virtually nonexistent among those who believed they did well on the experimental test but substantial among those who believed they did poorly on the experimental test.

It is informative to integrate these results with our earlier findings. Although HSE people are more generous in their performance appraisals than are LSE people, these perceptions, per se, do not appear to be the critical determinant of self-esteem differences in emotion. Rather, the key difference seems to lie in how reactive or sensitive the two self-esteem groups are to a perceived poor performance. The admission that one has done poorly engenders lower FOSW in LSE people than in HSE people. Another way of saying this is that LSE people's FOSW are more closely tied to their recent performances than are HSE people's (Brown & Mankowski, 1993; Kernis, Cornell, Sun, Berry, & Harlow, 1993).

Study 2

The results from Study 1 provide initial support for three conclusions: (a) self-esteem differences in response to perfor-

³ Because we used problem difficulty (rather than false feedback) to manipulate success and failure, it is important to rule out differences in actual performance as an explanation for our findings. To address this issue, we conducted regression analyses using self-esteem, the actual number of problems participants solved, and the interaction (cross-product term) between these variables to predict participants' emotional reactions. Consistent with the analyses reported in the text, self-esteem and task performance did not interact in the prediction of the outcome-dependent emotions ($p > .30$) but did interact in the prediction of FOSW ($\beta = -.43, p < .05$). A comparable pattern emerged in Study 2.

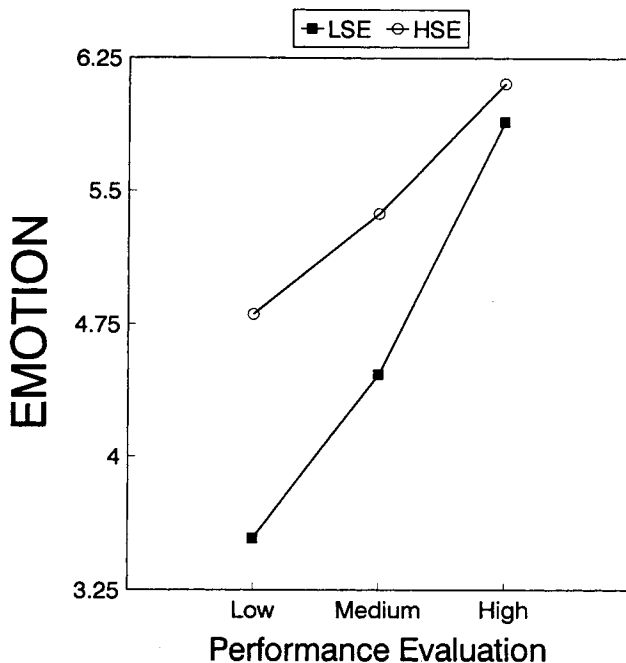


Figure 1. Feelings of self-worth as a function of self-esteem and perceived performance: Study 1. LSE = Low self-esteem; HSE = high self-esteem.

mance outcomes are more apparent for FOSW than for more generalized feelings of happiness and sadness; (b) these differences are stronger following failure than following success; and (c) these differences reflect greater sensitivity on the part of LSE people to negatively appraised performances.

We conducted a second study to replicate and extend these findings. One addition to Study 2 was the assessment of emotional states before the experimental task. We have argued that the self-esteem effects we observed represent different emotional reactions to a poor performance. However, self-esteem differences in emotion are found even in the absence of any precipitating event (Watson & Clark, 1984). This admits the possibility that the effects in the failure condition are not due to different responses to failure per se, but are simply due to preexisting differences. To address this issue, we had participants complete a mood measure at the start of the experimental session. This allowed us to statistically control for these scores when conducting our main analyses.

In Study 2 we also gathered information about participants' perceptions of their general intelligence following their task performance. Research suggests that LSE people tend to magnify and overgeneralize the negative implications of failure, such that failure gives rise to a general sense of inadequacy (Brown & Smart, 1991; Epstein, 1992; Kernis et al., 1989). In the present case, failure at a test of creativity may lead LSE people to believe they are wholly lacking in intelligence and are generally incompetent. These perceptions, in turn, could explain why their FOSW are so low following failure (Kernis et al., 1989; see also Carver & Ganellen, 1983; Carver, Ganellen, & Behar-Mitrani, 1985, for related work among depressives). To address

this issue, we had participants complete an adjective checklist measuring generalized perceptions of intelligence after receiving their test scores; we then examined the association between these perceptions and FOSW.

Method

Participants

The participants were 129 University of Washington undergraduates (50 men, 79 women). As in Study 1, they were drawn from the top or bottom thirds of the Rosenberg (1965) self-esteem scale and participated in exchange for extra course credit. Sixty-two participants were classified as having LSE ($M = 16.61$), and 67 were classified as having HSE ($M = 27.39$). The data from 5 additional participants were discarded: Two failed to follow directions, and 3 expressed suspicion regarding the experimental procedures.

Design, Materials, and Procedure

There were two main differences between this study and Study 1. First, before being introduced to the experimental task, participants completed the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988). This instrument is a widely used measure of general emotional states. The second difference is that after learning how they had done on the experimental test and filling out the emotion questionnaire used in Study 1, participants completed a trait adjective checklist. This questionnaire asked them to indicate how well six items (*intelligent, smart, bright, unwise, slow-witted, and simple-minded*) described them (1 = *not at all*, 7 = *very much*). After completing these items, participants signaled to the experimenter that they were finished, and they were debriefed, thanked, and excused.

Results and Discussion

Preliminary Analyses

A 2×2 (self-esteem \times outcome) ANOVA on the number of problems participants solved revealed a single main effect of outcome: Participants in the success condition solved more problems ($M = 7.72$) than did participants in the failure condition ($M = 3.41$), $F(1, 125) = 178.01$, $p < .001$. Participants in the success condition also evaluated their performance more favorably ($M = 6.58$) than did those in the failure condition ($M = 3.82$), $F(1, 125) = 81.08$, $p < .001$. Finally, HSE participants once again evaluated their performance more favorably than did LSE participants ($M_s = 5.41$ and 4.80 , respectively), but in this study the effect fell short of significance, $F(1, 125) = 3.21$, $p = .07$.

Main Analyses

As in Study 1, we derived emotion scales by averaging the four indicators of each emotion type ($\alpha_s = .81$ and $.74$ for the outcome-dependent and FOSW scales, respectively). We then performed a 2 (self-esteem) $\times 2$ (outcome) $\times 2$ (emotion type) ANOVA on these emotion scales, treating the last variable as a within-subjects one.

The ANOVA revealed main effects of self-esteem, $F(1, 125) = 52.43$, $p < .001$, outcome, $F(1, 125) = 13.24$, $p < .001$, and emotion type, $F(1, 125) = 9.87$, $p < .01$, and the critical Self-

Esteem \times Outcome \times Emotion Type interaction, $F(1, 125) = 4.47, p < .05$. Table 2 presents the means relevant to interpreting the interaction. The left side of the table displays the results for the outcome-dependent emotions. Replicating the results of our earlier study, simple effects tests of these data revealed simple main effects of self-esteem, $F(1, 125) = 38.69, p < .001$, and outcome, $F(1, 125) = 7.83, p < .01$, but no two-way interaction ($F < 1$). The lack of an interaction indicates again that the outcome manipulation had a comparable effect on the emotional responses of HSE participants and LSE participants.

The situation is different as concerns FOSW (see the right side of Table 2). Here, simple main effects of self-esteem, $F(1, 125) = 48.99, p < .001$, and outcome, $F(1, 125) = 19.28, p < .001$; were qualified by a simple Self-Esteem \times Outcome interaction, $F(1, 125) = 5.82, p < .025$. As before, the tendency to respond to failure with diminished FOSW was stronger for LSE participants, $F(1, 125) = 21.16, p < .001$, than for HSE participants, $F(1, 125) = 1.43, ns$. Looked at somewhat differently, self-esteem differences were again more pronounced following failure, $F(1, 125) = 44.90, p < .001$, than following success, $F(1, 125) = 10.85, p < .01$.

The preceding results essentially replicate the results of Study 1.⁴ To determine whether LSE participants again showed a greater sensitivity to a perceived failure than did HSE participants, we repeated our regression analyses, using participants' perceptions of their performance, self-esteem, and the interaction of these variables (i.e., cross-product term) to predict FOSW. Once again, all three sources of variance were significant predictors of these emotional reactions (all $ps < .01$). Inspection of the interaction confirmed that LSE participants were more reactive to a perceived failure than were HSE participants.

Supplemental Analyses

Chronic emotional states. A secondary purpose of the present study was to take into account self-esteem differences in more general emotional states. As indicated earlier, self-esteem differences in emotion are commonly found in the absence of

any precipitating event, such as a recent success or failure experience (Watson & Clark, 1984). In an attempt to control for these differences, we had participants complete the PANAS (Watson et al., 1988) at the start of the experimental session. This 20-item scale yields two scores: one for positive affect (PA) and one for negative affect (NA). Self-esteem was, in fact, correlated with both of these scores ($rs = .62, -.58$ for PA and NA, respectively, both $ps < .001$).

If our main findings are due to preexisting differences in emotion, we should have found that they are eliminated once these differences are statistically controlled. This was not the case. A Self-Esteem \times Outcome \times Emotion Type ANCOVA with PA and NA scores as covariates revealed results comparable to our main analyses. Most important, the triple interaction we have focused on remained significant when PA and NA scores were statistically controlled, $F(1, 123) = 4.76, p < .05$.

Table 3 presents the adjusted means. For the outcome-dependent emotions (left side of Table 3), the only significant effects were for the two covariates (both $ps < .01$) and the simple main effect of outcome, $F(1, 123) = 14.05, p < .001$. Neither the main effect of self-esteem nor the Self-Esteem \times Outcome interaction even approached significance once general emotional tendencies were taken into account. These findings suggest that self-esteem has no effect on these emotions, apart from any preexisting differences.

The situation is different for FOSW. Although the two covariates were again significant (both $ps < .02$), both the main effect of outcome, $F(1, 123) = 26.39, p < .001$, and the critical Self-Esteem \times Outcome interaction were significant, $F(1, 123) = 7.35, p < .01$. Moreover, the (adjusted) mean pattern shown in the right side of Table 3 is virtually identical to the one shown in Table 2.

In summary, although PA and NA were related to participants' emotional reactions to their performance outcomes, controlling for these perceptions did not alter our main findings. Indeed, controlling for these perceptions served only to eliminate the main effects of self-esteem and self-esteem differences following success. Adjusting for these scores therefore provided even stronger evidence that failure produces lower FOSW among LSE people than among HSE people.

Self-appraisals. Another goal of Study 2 was to determine whether differences in the tendency to overgeneralize from failure might play a role in the greater emotional sensitivity LSE people show to failure. To address this issue, we examined participants' perceptions of their intellectual qualities following the experimental task. After reversing the scoring for the three negative attributes, we averaged the six descriptors to form a self-appraisal index ($\alpha = .81$). We then analyzed these scores with a 2×2 (self-esteem \times outcome) ANOVA.

The ANOVA revealed a main effect of self-esteem, $F(1, 125)$

Table 2
Mean Ratings of Outcome-Dependent Emotions and FOSW as a Function of Prior Outcome and Self-Esteem: Study 2

Outcome	Emotion type							
	Outcome dependent				FOSW			
	LSE		HSE		LSE		HSE	
	M	SD	M	SD	M	SD	M	SD
Success	5.04	1.14	6.02	0.63	5.43	0.91	6.10	0.53
Failure	4.45	1.22	5.66	0.74	4.48	1.07	5.86	0.72
Difference	.59		.36		.95		.24	

Note. Values could range from 1 to 7; higher scores indicate more positive emotion. FOSW = feelings of self-worth; LSE = low self-esteem; HSE = high self-esteem.

⁴ The main difference is that the emotion effects for HSE participants were generally weaker in this study than in Study 1. To determine whether these differences were significant, we pooled the data from the two studies and repeated our main analyses, including study as a new variable. The addition of this variable did not qualify any of our findings, suggesting that the differences between the two studies are likely to be due to chance.

= 73.10, $p < .001$, and a Self-Esteem \times Outcome interaction, $F(1, 125) = 8.18$, $p < .01$. Examination of Table 4 reveals that, among LSE participants, self-appraisals of intelligence were lower following failure than following success, $F(1, 125) = 7.74$, $p < .025$. The reverse tended to be true among HSE participants, but the effect was not significant, $F(1, 125) = 1.60$, *n.s.* Thus, whereas LSE participants saw themselves as generally less intelligent after failing the experimental task, HSE participants did not.

Mediation. Our final set of analyses was geared toward exploring whether these differences in perceived intelligence might have mediated the emotion effects we observed. According to Baron and Kenny (1986), evidence of mediation requires that (a) the predictor variables affect the presumed mediator, (b) the predictor variables affect the criterion variable, and (c) the presumed mediator affects the criterion variable after statistically controlling for the predictor variables. In the present case, mediation can be assumed if self-esteem interacts with performance evaluations to predict intelligence (the presumed mediator) and FOSW (the criterion), and if intelligence continues to predict FOSW after controlling for self-esteem, performance, and the interaction between these two variables.⁵

As shown in Figure 2, a series of regression analyses using standardized variables revealed that all three conditions were met. Looking left to right, the figure reveals that (a) self-esteem, perceptions of one's performance, and the interaction between these variables predicted self-appraisals of intelligence; (b) these variables also predicted FOSW (both before [in parentheses] and after [in boldface type] self-appraisals of intelligence were included in the equation); and (c) self-appraisals of intelligence predicted FOSW even after we statistically controlled for the other predictor variables. The data thus satisfy the requirements for mediation Baron and Kenny (1986) outlined; they suggest that part (though not all) of the reason why LSE people react more strongly to a poor performance than do HSE people may be because LSE people are more apt to infer they are generally low in intelligence when they fail.

General Discussion

Self-esteem differences in emotional responses to performance outcomes are widely assumed, but they have not been

Table 3
Mean Adjusted Ratings of Outcome-Dependent Emotions and FOSW as a Function of Prior Outcome and Self-Esteem: Study 2

Outcome	Emotion type			
	Outcome dependent		FOSW	
	LSE	HSE	LSE	HSE
Success	5.52	5.62	5.83	5.77
Failure	4.85	5.17	4.41	5.46
Difference	.67	.45	1.42	.31

Note. Values could range from 1 to 7; higher scores indicate more positive emotion. FOSW = feelings of self-worth; LSE = low self-esteem; HSE = high self-esteem.

Table 4
Mean Self-Appraisals of General Intelligence as a Function of Prior Outcome and Self-Esteem

Outcome	LSE		HSE	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Success	3.70	0.47	4.19	0.38
Failure	3.37	0.59	4.34	0.47
Difference	0.33		-0.15	

Note. Values could range from 1 to 7; higher scores indicate more positive self-appraisals. LSE = low self-esteem; HSE = high self-esteem.

documented consistently at the empirical level. In this article we sought to (a) identify conditions when they will occur and (b) illuminate why they occur.

Our data suggest that the type of emotion people feel after success or failure is relevant to the first of these issues. Self-esteem did not influence how happy and unhappy participants felt when they succeeded or failed at the experimental task; it did, however, influence how humiliated and ashamed of themselves they felt when they failed. Following previous theoretical work (Weiner et al., 1978), we believe these differences occurred because FOSW are more relevant to the self than are outcome-dependent emotions.

This is not to say that self-esteem and performance outcomes will interact to influence only the emotions we have used to measure FOSW. It is probably most fruitful to think of outcome-dependent emotions and FOSW as falling on a continuum, perhaps defined at the endpoints by the descriptors we have examined in this article. Other emotions, such as encouragement or dejection, would seem to fall between these extremes and may also be influenced by self-esteem. The point we wish to make is that self-esteem differences in emotional reactions to performance outcomes are strongest for emotions that directly implicate the self (Baumeister & Tice, 1985).

Our findings also show that this influence is greater following failure than success. For the most part, the data suggest that both self-esteem groups feel good (happy and proud) when they succeed. It is when people fail that self-esteem differences emerge. Following failure, FOSW plummet among LSE people but remain relatively high among HSE people.

These findings are at odds with theoretical accounts based on principles of self-consistency. Dissonance theory predicts that HSE people should experience greater distress when they fail than do LSE people, because failure is more inconsistent with their highly favorable self-views (Aronson, 1992; Aronson & Carlsmith, 1962). Our data provide no support for this position. LSE people, not HSE people, suffer more when they experience failure.

There is some evidence that this occurs because LSE people

⁵ We used participants' perceptions of their performance (rather than task difficulty) for this analysis because they (a) are continuous rather than categorical and (b) more closely capture the phenomenology of success or failure that is so critical to the effect we are discussing.

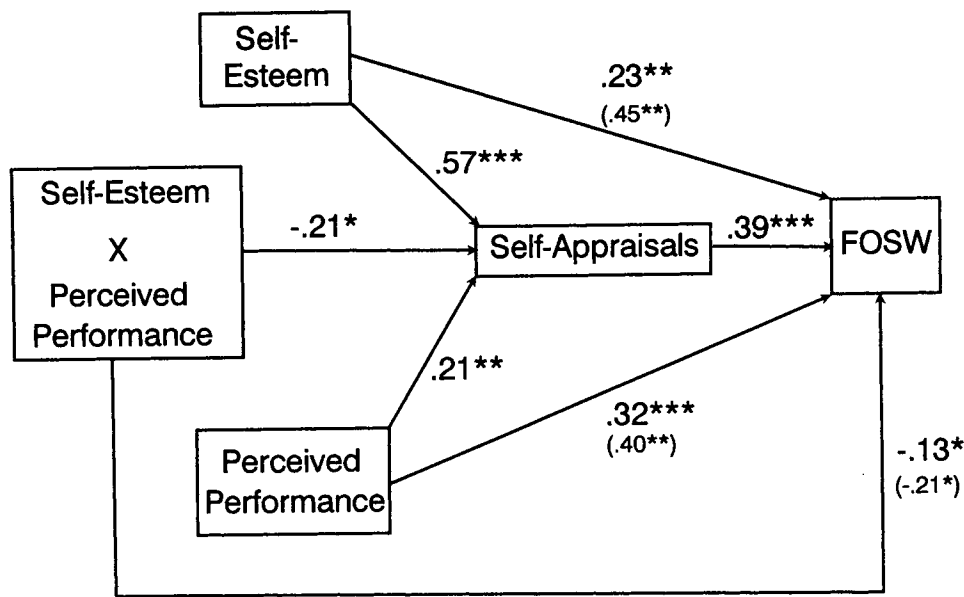


Figure 2. Self-appraisals of intelligence as a mediator of the effects of self-esteem and perceived performance on feelings of self-worth (FOSW): Study 2. All values are standardized regression weights. (Values in parentheses come from analyses without self-appraisals in the equation.) * $p < .05$. ** $p < .01$. *** $p < .001$.

overgeneralize the negative implications of failure. In Study 2, LSE participants rated their general intelligence and competencies more negatively after failure than after success. HSE participants did not show this effect. They tended to do just the opposite: They rated their general intelligence a bit more positively after failure than after success. This pattern is consistent with other evidence that LSE people overgeneralize from failure, whereas HSE people compensate for failure (Baumeister, 1982; Brown & Smart, 1991).

Although the data in Figure 2 are correlational and cannot be used to establish causal relations, the pattern suggests that differences in the way the two self-esteem groups appraised their general intelligence may have mediated participants' emotional responses to their performance outcomes (see also Kernis et al., 1989). One way to think about the pathway leading from outcomes to emotion is as follows: Initially, people experience an objective performance (i.e., they objectively score high or low at some task). They then interpret or construe this performance in terms of personal standards and values (i.e., they label their performance as a personal success or failure). Next, the implications of this perceived performance for the self are determined. Finally, people experience an emotional reaction.

With reference to this framework, our data suggest that when both self-esteem groups experience an objectively poor performance, LSE people are more apt than HSE people to regard it as a personal failure. However, these differences do not appear to be the critical determinant of emotion, because self-esteem differences emerge even among those who agree they have done poorly. What is important is how sensitive people are to this admission. In response to a perceived poor performance, LSE

people assume that they are generally lacking in competence and suffer diminished FOSW.

Theoretical Explanations

Several theories can explain why LSE people are more reactive to failure than are HSE people. Campbell (1990) showed that LSE people are generally more uncertain of where they stand on any given attribute than are HSE people. This lack of *cognitive clarity* could lead to a greater susceptibility to environmental feedback, perhaps explaining why LSE people are more affected by failure than are HSE people (see also Brockner, 1984).

Steele's (1988) self-affirmation theory may also be relevant. This theory assumes that people cope with negative outcomes in one domain by focusing on their virtues in other, unrelated domains. Because LSE people believe they have fewer positive qualities than do HSE people, they are less able to call on these cognitive resources when they fail and therefore suffer greater emotional distress (Josephs, Larrick, Steele, & Nisbett, 1992; Spencer, Josephs, & Steele, 1993).

Both of these models trace self-esteem differences to people's beliefs about their specific attributes and qualities. As such, they assume that if LSE people could be convinced that they possessed many positive attributes and characteristics, they would avoid feelings of humiliation and shame when they fail. Although plausible, we favor a less rational, less cognitively mediated explanation for why LSE people are humiliated when they fail (Brown & Dutton, 1994a, 1994b). We assume that, early in life, LSE people come to think of themselves as somehow bad,

worthless, or globally deficient whenever they make a mistake or fail (cf. Sullivan, 1953). These feelings persist and are subsequently activated when LSE people experience failure in adulthood. From this perspective, insulating LSE people from the pain of failure entails more than persuading them they have other positive qualities or do other things well, it entails breaking the virtually automatic connection between failure and feelings of worthlessness.

Implications

Whatever the theoretical mechanisms (and there certainly may be more than one), the tendency for LSE people to be more emotionally distraught by failure has important implications. Self-esteem has been linked to a dizzying number of variables, often with only limited empirical support (Wylie, 1979). In our opinion, part of the problem is that it has been asked to do too much. Self-esteem is a critical psychological variable, but its importance is not boundless.

On the basis of our findings, we believe self-esteem plays its most important role in guiding people's self-relevant emotional responses to negative outcomes. Consequently, it will be most closely tied to behavior when responses to failure, disappointment, or rejection are involved (Tice, 1991). For example, self-esteem will be a better predictor of task performance following failure than following success or no previous performance (see, for example, Brockner, 1979; Shrauger & Sorman, 1977).

When it comes to freely chosen behavior (i.e., the things individuals choose to do), self-esteem will be most important when there is a potential for failure, rejection, or disappointment. Expectancy-value models of behavior provide a useful context for a discussion of this issue. These models assert that behavior is a joint function of a person's expectancy that a given goal can be attained in conjunction with the value the person places on attaining or not attaining the goal. It is often assumed that self-esteem differences in behavior stem from the expectancy component in the expectancy-value framework (Brockner, Wiesenfeld, & Raskas, 1993). Presumably, both groups *want* (i.e., value) the same things, but HSE people are more confident they can get it. Consequently, they engage in more adaptive behaviors.

Our findings suggest an additional explanation. Failure hurts LSE people more than HSE people. Cast in the language of an expectancy-value model of behavior, this suggests that LSE people place a greater negative value on not attaining a goal than do HSE people (cf. Atkinson, 1964). Their behavior in many situations may be guided by this fact. They may become more concerned with protecting the self from the pain of failure rather than risking success (Rhodewalt, Morf, Hazlett, & Fairfield, 1991; Tice, 1991). This analysis suggests that even with expectancies held constant, LSE people will not undertake the same behaviors HSE people undertake because they (correctly) anticipate that a negative outcome will be so aversive.

One domain in which these differences should be particularly evident is risk-taking behavior. Josephs et al. (1992) found that LSE people are more inclined than are HSE people to choose a sure outcome of moderate utility over a riskier but potentially

more profitable outcome. They explain their findings with reference to feelings of regret: LSE people prefer a sure thing to a gamble to avoid feelings of regret if the gamble proves unwise. This explanation is consistent with our more general claim that LSE people experience more intense negative reactions to failure than do HSE people.

Work by Baumeister et al. (1989) also is relevant to this analysis. Baumeister et al. surveyed the self-esteem literature and concluded that LSE people adopt a more conservative interpersonal style than do HSE people. They traced these differences to differential expectancies: Doubting their ability to successfully execute self-aggrandizing interpersonal behaviors, LSE people assume a public posture of modesty and conservatism. Differences in the negative incentive value of failure can also explain these differences. LSE people may be less risk-oriented because the costs of failure are so great. This is apt to be true in private as well as in public, although the public embarrassment of failure may be especially aversive to LSE people.

Our analysis may also illuminate the effects of self-esteem on susceptibility to social influence. There is some evidence that LSE people are more conforming than are HSE people (Brockner, 1984). The usual explanation is that LSE people lack confidence in their judgment or are otherwise uncertain of what to do. Our approach suggests an additional and potentially more potent mechanism. The price people pay for refusing to conform to social pressure is rejection. One runs the risk of being ostracized by the group for failing to go along with the majority. Social rejection of this sort should be especially aversive for LSE people, and they should be especially motivated to avoid it by succumbing to the influence of others.

Similar analyses can be applied to other areas of behavior. In general, self-esteem will be important whenever people anticipate or taste defeat.

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Received January 14, 1994

Revision received September 12, 1994

Accepted September 17, 1994 ■

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